Education & Training – Anytime, Anywhere, at the Speed of Light

Keesler Cyberspace Education and Training Update

Brig Gen Ian Dickinson

Commander

81st Training Wing

I n t e g r i t y - S e r v i c e - E x c e l l e n c e

Keesler's Recovery

Base Housing

BX & Commissary

Student Dorm 9

Events Center

BCOT to UCT

Basic Communications Officer Training (BCOT)

Block #	Block Title	Training Days
1	Fundamentals	5
2	Air Force Network Management	6
3	Air Force Cyber and Information Operations	2
4	Communications Planning and Management	6
5	Expeditionary Communications	7
	TRAINING DAYS	26

Undergraduate Cyber Training (UCT)

Block #	Block Title	~Training Days
1	Introduction to Cyber Operations	13
2	Information Technology Fundamentals	14
3	DoD 8570.1M Boot Camp & Certification	9
4	Deployed Operations	13
5	Cyber Surety	5
6	Attacking & Exploiting Cyber Networks	10
7	AF Enterprise Structure and Defense	10
8	Telephony Networks	4
9	Mobile, Space & Satellite Networking	6
10	Battlefield Networks	6
11	Industrial Control Systems	5
12	Laws & Ethics	3
13	Cyber Network Threats & Defense	7
14	Fighting Through a Cyber Attack (Capstone)	10
	TRAINING DAYS	115

Timeline   Pipeline

UCT Content Breakdown

Subject	Percentage	Hours
IP Networking	34%	310 hrs
Cyber Fundies	20%	185 hrs
Convergent Tech	12%	115 hrs
Deployed Ops	12%	107 hrs
ISR	8%	71.5 hrs
TTPs	6%	57.5 hrs
Space	5%	50 hrs
Law & Ethics	3%	24 hrs

Total: 920 hrs
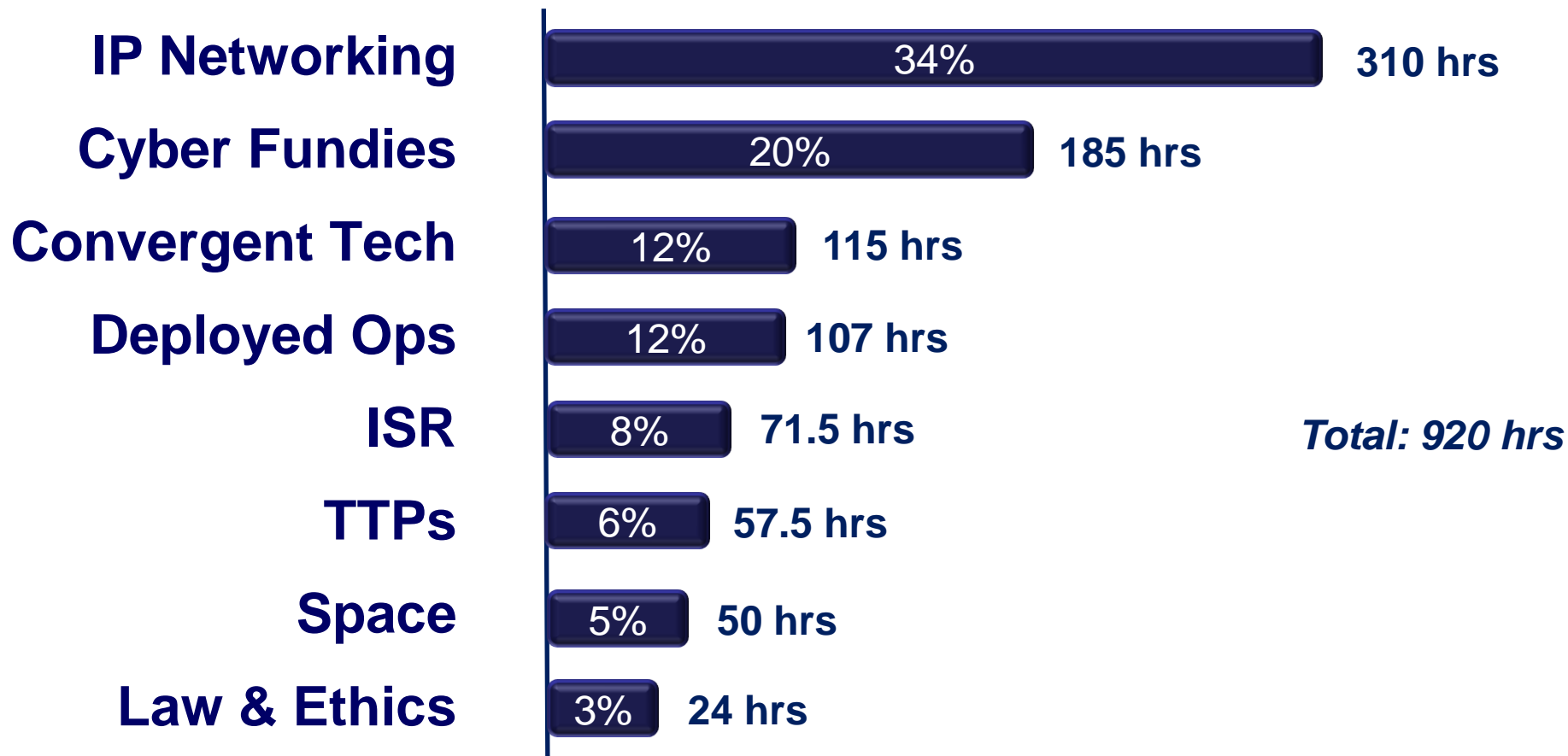
UCT = 920 Academic Hours in 8 Subjects

Cyber Training Cross-Walk

Course Name	Location	Sponsor	Length	Target Audience	Graduates become
Joint Cyber Analysis Course (Formerly DNA* courses) (JCAC)	Corry Station (Pensacola NAS, FL)	NSA	26 wks	Enlisted NSA/CSS Analysts	**Analysts** for NSA CNO missions
Basic CNO Planner's Course (BCNOPC)	Ft. Belvoir, VA	1st IO Cmd (Land)	2 wks	Mid-grade officer, SNCO IO planners	**Planners** for Div/Corps G7/S7 (IO)
Joint Network Attack Course (JNAC)	Corry Station (Pensacola NAS, FL)	JFCC-NW	4 wks	Mid-grade officer, SNCO NetA planners	**Planners** for JFCC-NW
Undergrad Network Warfare Training (UNWT)	Hurlburt Field, FL	AFSPC (39 IOS)	12 wks	Junior CGOs, mid-level NCOs	Network warfare **operators** for 24 AF
Undergrad Cyber Training (UCT)	Keesler AFB, MS	AETC (333 TRS)	23 wks	AF officer accessions	Cyber warfare & enterprise **operators** for AF

*DNA – Digital Network Analysis

The Cyberspace Airman
3D Way-Transformation

	Squad	Start Date, Length	8570	FY10 Planned / Projected	
10 Days					
Knowledge Ops 3D0X1 (6180)	336	27 Oct 09, 31 Days		464 / 436	
Cyber Sys Ops 3D0X2 (3969)	336	22 Oct 09, 46 Days	★	454 / 389	86%
Cyber Surety 3D0X3 (1525)	336	20 Oct 09, 30 Days	★	117 / 106	91%
Comp Program 3D0X4 (640)	336	2 Nov 09, 60 Days		48 / 54	
Client Systems 3D1X1 (2005)	336	20 Oct 09, 50 Days	★	270 / 175	65%
Cyber Transport 3D1X2 (3995)	338	9 Nov 09, 85 Days	★	426 / 376	88%
RF Transmission 3D1X3 (4259)	338	5 Jan 10, 82 Days		231 / 180	78%
Radar 3D1X5 (578)	338	14 Oct 09, 86 Days		60 / 60	
Airfield 3D1X6 (1009)	338	7 Oct 09, 98 Days		62 / 62	
Cable/Antenna 3D1X7 (530)	364	19 Oct 09, 70 Days		178 / 178	
Spectrum Ops 3D1X4 (205)	333	5 Jan 10, 74 Days		10 / 5	50%
Cyberspace Defense Ops 1B4X1 (50)	333	Jan 11, 85 Days	★	N/A	

IT Fund - S

IT Fund - L

41 Days

Current through: 30 Apr 10

How We Train

Cyber Campus

Welcome to Sharepoint

Webcast

MyBase

Mobile Training Teams

In-Residence

HOME | PERSONAL SPACE | AIR FORCE | BASES-ORGS-FUNCTIONAL AREAS | LIFE & CAREER | LIBRARY

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333D TRAINING SQ - EDUCATION AND TRAINING. ANYTIME, ANYWHERE, AT THE SPEED OF LIGHT   (show address)

All Organizations : MAJCOM : Air Education and Training Command (AETC) : 2nd Air Force : 81st Training Wing : 81st Training Group : 333d Training Sq – Education and Training. Anytime, Anywhere, at the Speed of Light

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Contact the Content Manager

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CoP Links +

(8) Links

- » 33S/17D Officer
- » ACOT
- » AFPC 33S
- » BCOT
- » C&I Force Development
- » Scope Warrior
- » Scope Eagle
- » AFCEA Gulf Coast Chapter

DoD Notice and Consent +

(0) DoD Notice and Consent

Leadership +

(3) Organization

- » Commander - Lt Col Scott E. Solomon [pdf]
- » 1st Sergeant - MSgt Lee A. Wright
- » Organizational Chart [pdf]

Front & Center +

(5) About Us

- » Vision & Mission
- » Mad Duck - In the Beginning
- » 333 TRS Mission brief
- » Squadron Shield Heraldry [pdf]
- » New Mad Duck Mascot

Cyber in the News +

(11) Keesler Cyber News

- » 19 Jan 10 - "Avatar" coming to life at Keesler
- » 22 Oct 09 - Keeslers MyBase Classroom Powers Up
- » 08 Oct 09 - Keesler Heralds Cyber Training
- » 01 Oct 09 - Cyber Training Stands Up Monday
- » 20 Aug 09 – Conference sets cyber training path
- » 16 Jul 09 - Cyber Training Interview (Part 2)
- » 16 Jul 09 - Cyber Training Interview (Part 1)
- » 2 Jul 09 - Training Evolves to Support Cyber Mission
- » 18 Jun 09 - Information Manager Transform into Knowledge Ops
- » 4 Jun 09 - President Sets Course for Cyber Security
- » 7 May 09 - Keesler Creating Virtual Training Environment

Air Force Hot Links +

(12) Links

- » 39 IOS - 39th Information Operations Squadron
- » AFFMA – Air Force Frequency Management Agency
- » AFMA – Air Force Manpower Agency
- » AFNIC - Air Force Network Integration Center
- » AFSPC – Air Force Space Command

Webcast Online Training +

(3) Courses

- » Comm Officer Warfighting Integration Education
- » Comm Officer Deployable & Tactical Communications
- » Enterprise Network Operations

Mobile Training Team Courses +

(8) Courses

- » DCAPES MAJCOM Functional Area Manager Course
- » DCAPES MAJCOM Planner Course
- » GCCS-J I3 Administration Familiarization
- » GCCS-J Advanced System Administration
- » GCCS-J Database Fundamentals
- » GCCS-J Oracle Administration
- » GCCS-J Sybase Administration
- » Windows Vista Installation and Troubleshooting

In-Resident Courses +

(6) Course Listing

- » 3D - Cyberspace Support
- » 33S - Communications Officer
- » Alphabetically by Course Name
- » Alphabetically by Course Number
- » ETCA – Education and Training Course Announcements
- » UNWT – Undergraduate Network Warfare Training

Strategic Messages +

(5) Briefs

- » 2009-08-07 Maj Gen Ramsaur II
- » 2009-08-02 ANG
- » 2009 AETC Symposium Brief [pdf]
- » 2008-08-16 Gen Lorenz
- » 2008-08-15 Wing Mission Brief

(6) Spread the Word

Alerts

- ▶ Urgent
- ▶ Notices (0)
- ▶ My Inbox (0)

Air Force Indexes

- ··MAJCOM A-Z
- ··Bases A-Z
- ⊞·Organizations A-Z
- ··Functional Areas A-Z
- ··Applications A-Z
- ··Topics A-Z

Attention +

(1) Topics

Look Here
Must be CAC login to view link

Look Here OPEN SEATS!

MyBase +

(1) MyBase

Click Here

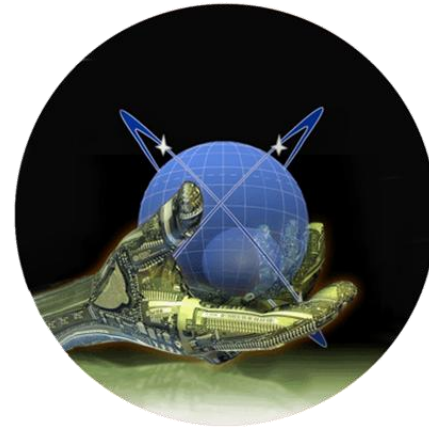**Did You Know! Best Portal Web Site on Keesler AFB!**

Questions!

- **We're positioned to Educate and Train the Cyber Force**

- **We're Cyber Mission Capable**

- **We're building the foundational blocks for "My Base"**
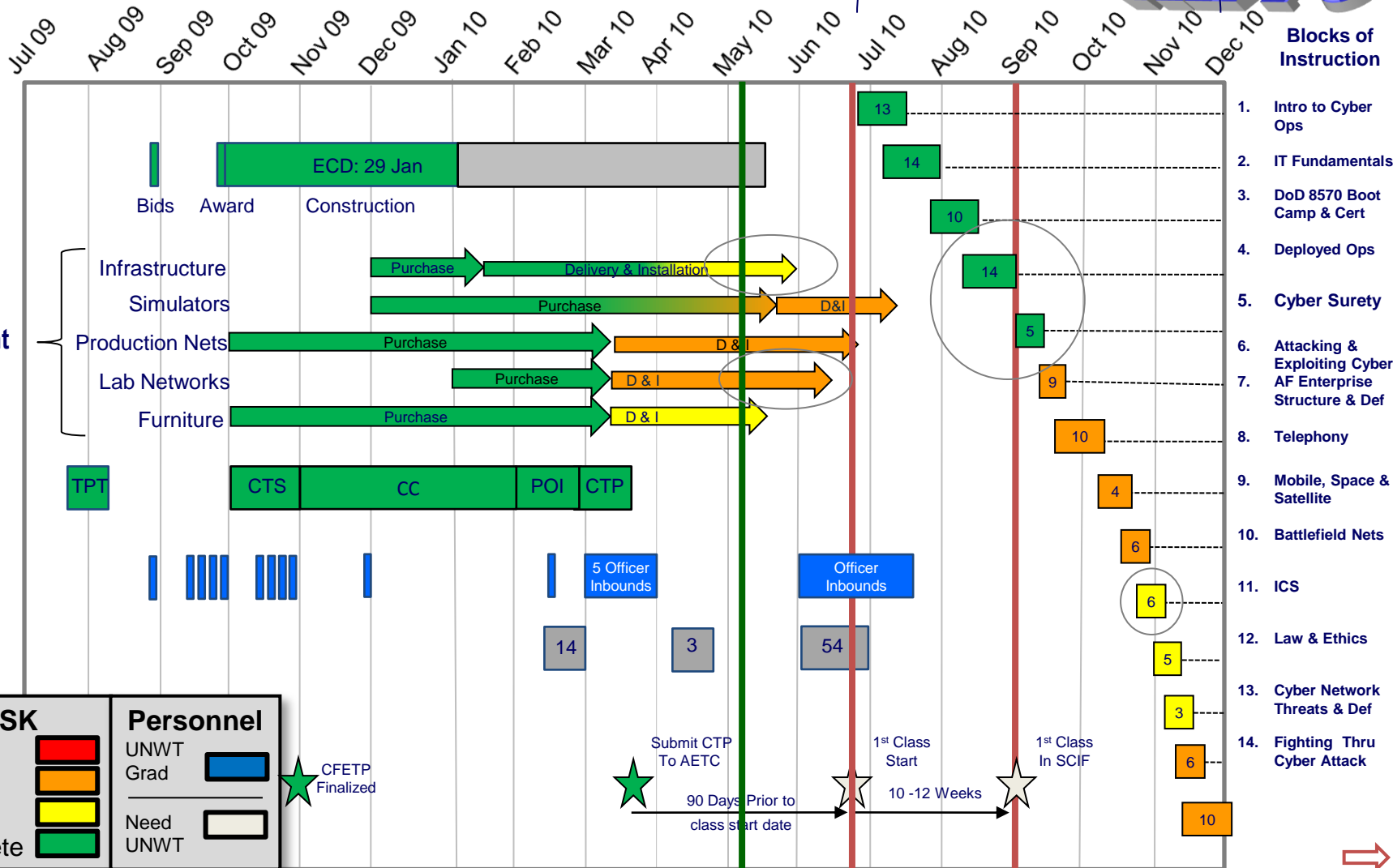
- **Education & Training…anytime, anywhere, at the speed of light**

UCT Timeline
May Snap Shot

Currently Low/Medium Risk – Challenges getting equipment ordered

Developing Cyber Warriors

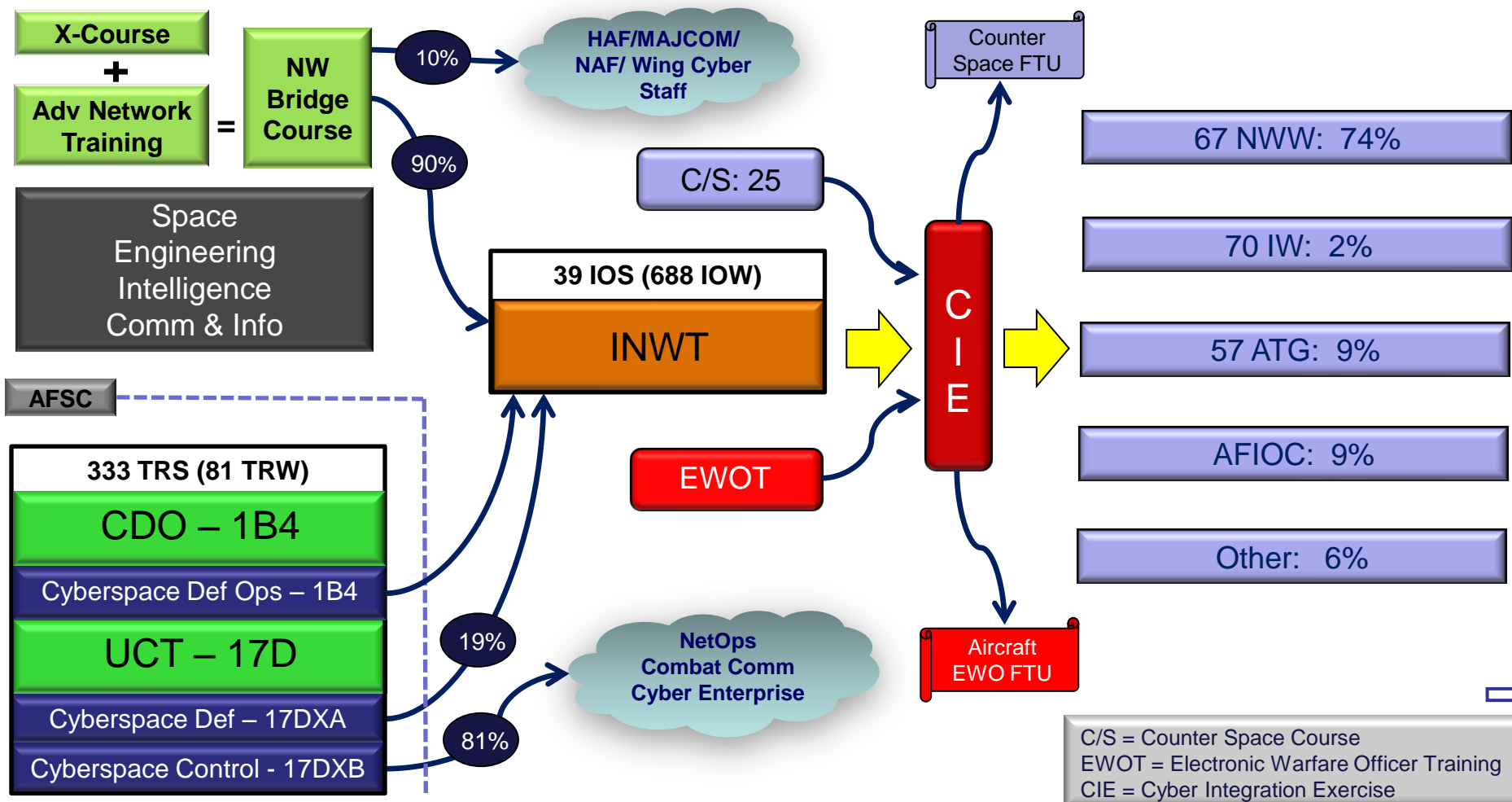| AFSC Awarding	→	IQT	→	MQT	→	Unit Mission Certification
Technical Knowledge & Skills		Tactical / Mission Knowledge & Skills		Mission System Knowledge & Skills		Assigned to Unit
JSUPT		F-15C FTU, AETC		Ops Unit		Ops Unit
SUNT		EC-130H FTU, ACC		EC-130H FTU		Ops Unit
UST		Sat Ops FTU, AETC		Ops Unit		Ops Unit
UCT		Cyber Ops, AFSPC		Ops Unit / FTU		Ops Unit
AFSC Award		Basic Cyber Warfare Trained (BCWT)		Basic Mission Capable (BMC)		Combat Mission Ready (CMR)

Institute a Systematic and Operational Approach to Cyber Training

Cyberspace Training 2011
Notional

```
Career Airmen ──────► IQT ──────────────► MQT ──► CMR
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X-Course
+
Adv Network Training = NW Bridge Course

10% ──► HAF/MAJCOM/ NAF/ Wing Cyber Staff

90%

Counter Space FTU

Space Engineering Intelligence Comm & Info

C/S: 25

39 IOS (688 IOW)

INWT

C I E

67 NWW: 74%

70 IW: 2%

57 ATG: 9%

AFIOC: 9%

Other: 6%

EWOT

AFSC

333 TRS (81 TRW)

CDO – 1B4

Cyberspace Def Ops – 1B4

UCT – 17D

Cyberspace Def – 17DXA

Cyberspace Control - 17DXB

19%

81%

NetOps Combat Comm Cyber Enterprise

Aircraft EWO FTU

C/S = Counter Space Course
EWOT = Electronic Warfare Officer Training
CIE = Cyber Integration Exercise

The Cyberspace Officer
Technical Training

Before - Comm & Info Training

After - Cyber Training

BCOT
(Initial Skills)

ACOT

Scope Eagle

UCT *
(Initial Skills – 115d)

X Course

ACOT
(8-12 Yrs)

Cyber 200 *
(Capt; 6-8 yrs)

Cyber 300 *
(Maj/Lt Col; 12-18 yrs)

Scope Eagle

* New Course
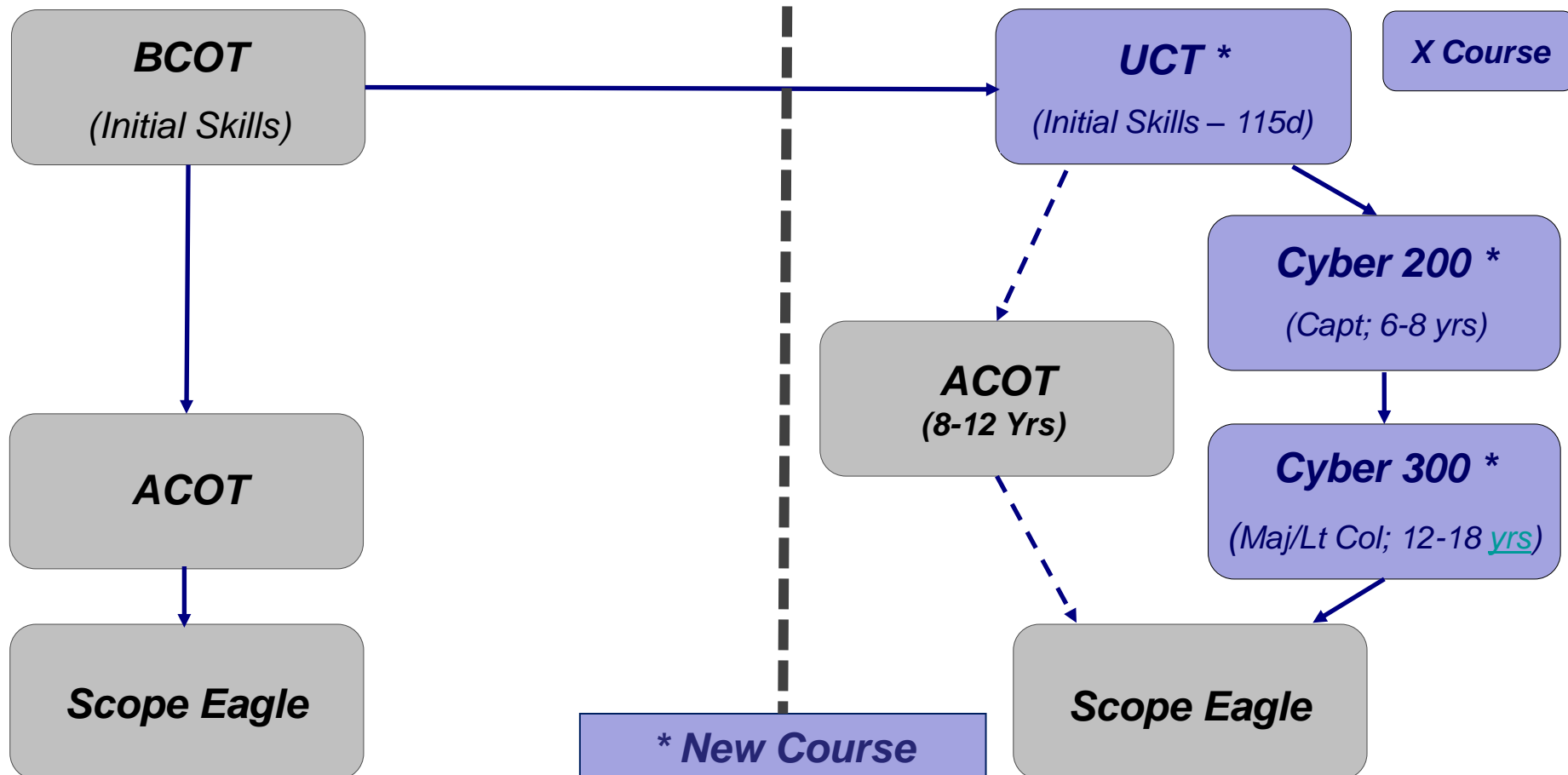
Future of ACOT past FY11 in question

Officer Course Outline

Cyber Operations Officer (17D) Course — Undergraduate Cyber Training (UCT)

Projected Content

			Mission Simulators	FOUO Academics & Course R&D	S/NF Academics & Course R&D	Academics & Course R&D	JWICS	Open Source Course R&D	NSAnet Course R&D	Approx Training Days
Active / Guard / Reserve Officer & Civilians — Foreign Officer	Stennis Hall	Block 1	Introduction to Cyber Operations		■						13
	Stennis Hall	Block 2	Information Technology Fundamentals	■	■						14
	McClelland Hall	Block 3	DoD 8570.1M Boot Camp & Certification	■							9
	McClelland Hall	Block 4	Deployed Operations	■							13
Reserve / Guard Officer	Stennis Hall	Block 5	Cyber Surety		■	■			■	■	5
	Stennis Hall	Block 6	Attacking & Exploiting Cyber Networks	■	■	■		■	■	■	10
	Stennis Hall	Block 7	AF Enterprise Structure and Defense	■	■	■					10
	Stennis Hall	Block 8	Telephony Networks	■	■	■		■	■	■	4
	Stennis Hall	Block 9	Mobile, Space & Satellite Networking		■	■			■	■	6
	Stennis Hall	Block 10	Battlefield Networks		■	■		■	■	■	6
	Stennis Hall	Block 11	Industrial Control Systems	■	■	■		■		■	5
	Stennis Hall	Block 12	Laws & Ethics		■						3
	Stennis Hall	Block 13	Cyber Network Threats & Defense	■	■	■		■	■	■	7
	Stennis Hall	Block 14	Fighting Through a Cyber Attack (Capstone)	■	■				■		10

* UCT ADL material to be incorporated throughout course

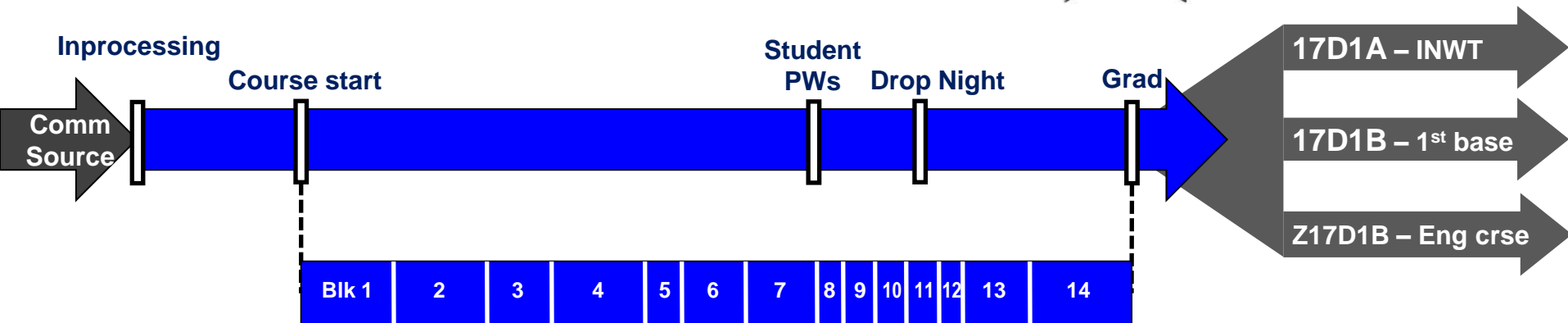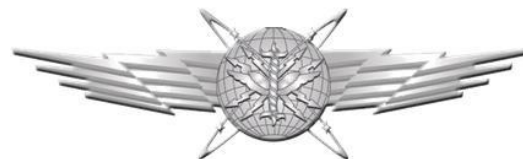**TOTAL PROJECTED TRAINING DAYS 115**

UCT Student Flow

Pre-graduation

- **Inprocessing**
- **Course start**
- **Assignment flow**
  1) AFPC drops assignments
  2) Turn-in preference worksheet (PW)
  3) Match student's rank & PWs against assignments
  4) Students find out their assignments on Drop Night

Post-graduation

- **17D1A – INWT at Hurlburt Fld**
- **17D1B – Proceed to 1st base**
- **Z17D1B – Attend engineering follow-on course at Keesler AFB**

Inprocessing

Course start

Student PWs

Drop Night

Grad

Comm Source

17D1A – INWT

17D1B – 1st base

Z17D1B – Eng crse

Blk 1	2	3	4	5	6	7	8	9	10	11	12	13	14

Enlisted AFSCs
Skills Convergence

Reflects Skills Convergence Only – Does Not Depict Personnel Transitions

Info Mgt				Comp Programmer		Knowledge Ops
Comm-Ops						Cyber Systems Ops
Info Mgt	Comm-Ops	Programmer	Voice/Cable	Tech Control	Comp/Crypto	Cyber Surety
Computer Programmer						Programmer
Info Mgt	Comp/Crypto		Comm-Ops	Voice	Ground Radio	Client Sys
Comp/Crypto		Tech Control	Voice Sys		VIIDS	Cyber Transport
Satcom/Wideband	Ground Radio	Antenna	VIIDS	Comp/Crypto	Tech Control	RF Transmission
Spectrum				Radio Ops		Spectrum Ops
Airfield Systems						Airfield Sys
Radar						Radar Sys
Cable/Antenna						Cable/Antenna

$\Rightarrow$

Force Characteristics

18 Comm and Info AFSCs

COMM-INFO OFFICER (33S)	
33S	Comm Officer
33SXA	Comm Engineering Officer

COMM-ELECTRONICS SYSTEMS (2E)	
2E0X1	Ground Radar
2E1X1	Satellite, Wideband, Telemetry
2E1X2	Airfield Systems
2E1X3	Ground Radio
2E1X4	Visual Imagery & Intrusion Detection
2E2X1	Network Infrastructure
2E6X2	Cable & Antenna Systems
2E6X3	Voice Network Systems

INFORMATION MANAGEMENT (3A)	
3A0X1	Knowledge Ops Mgmt

COMMUNICATIONS-COMPUTER SYSTEMS (3C)	
3C0X1	Operations
3C0X2	Programming
3C1X1	Radio Comm Systems
3C1X2	Electromagnetic Spectrum Mgmt
3C2X1	Network Integration
3C3X1	Planning & Implementation

POSTAL (8M)	
8M000	Postal

~ 28.4K Active Duty Military Authorizations

Mission Set Analysis

| Proficiency	BCNOPC	JNAC	JCAC	UNWT	UCT
Establish	0	0	0	0	12
Operate	0	0	15	21	21
Defend	1	2	13	23	23
Manipulate	9	10	16	11	10
Offence	0	0	3	14	13
Other	5	5	2	11	9
Comprehensive Proficiency Score	**15**	**17**	**49**	**80**	**88**

Weighted Scoring

- "Knowledge of" = 1 point
- "Understanding of" = 2 points
- "Employment of" or "Requirement"= 3 points

Enlisted Course Outline

Enlisted Initial Skills (1B4) Course			Projected Content						Approx Training Days
Cyberspace Defense Operations (CDO)			Mission Simulators	FOUO Academics & Course R&D	S/NF Academics & Course R&D	JWICS Academics & Course R&D	Open Source Course R&D	NSAnet Course R&D	
Prerequisites									
229 IOS	Online	Advanced Distributed Learning		green					30
336 TRS	As Needed	DoD 8570.1M Boot Camp & Certification		green					10
Location	**Block #**	**Block Title**							
Stennis Hall	1	Cyber Operations Fundamentals		green					5
Stennis Hall	2	Information Technology Fundamentals	gray	green					9
Stennis Hall	3	Advanced Command Line Interfacing	gray	green			purple		5
Stennis Hall	4	Cyber Surety		green	red		purple	orange	5
Stennis Hall	5	Attacking & Exploiting Cyber Networks	gray	green	red	yellow	purple	orange	10
Stennis Hall	6	AF Enterprise Structure and Defense		green			purple		10
Stennis Hall	7	Telephony Networks		green	red	yellow	purple	orange	4
Stennis Hall	8	Mobile, Space & Satellite Networking		green	red		purple	orange	6
Stennis Hall	9	Battlefield Networks		green	red	yellow	purple	orange	6
Stennis Hall	10	Industrial Control Systems		green	red	yellow		orange	5
Stennis Hall	11	Laws & Ethics		green	red	yellow	purple	orange	3
Stennis Hall	12	Cyber Network Threats & Defense	gray	green	red	yellow	purple	orange	7
Stennis Hall	13	Fighting Through a Cyber Attack (Capstone)	gray	green	red	yellow	purple	orange	10
TOTAL PROJECTED TRAINING DAYS									85

Cyber Campus Trng Network
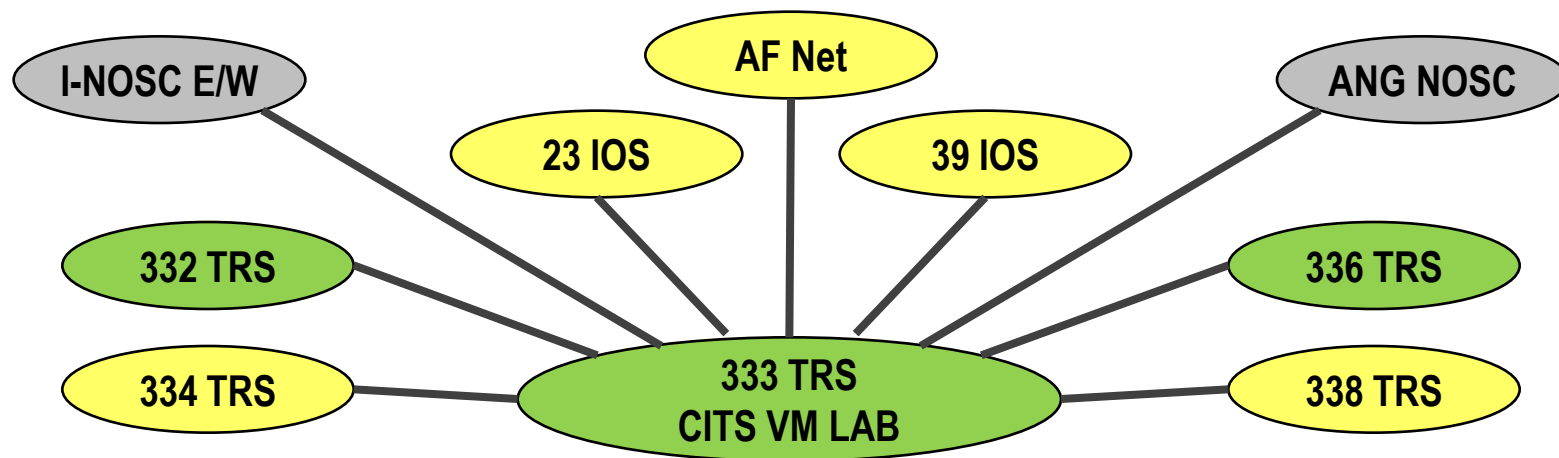
Phase 1
Phase 2
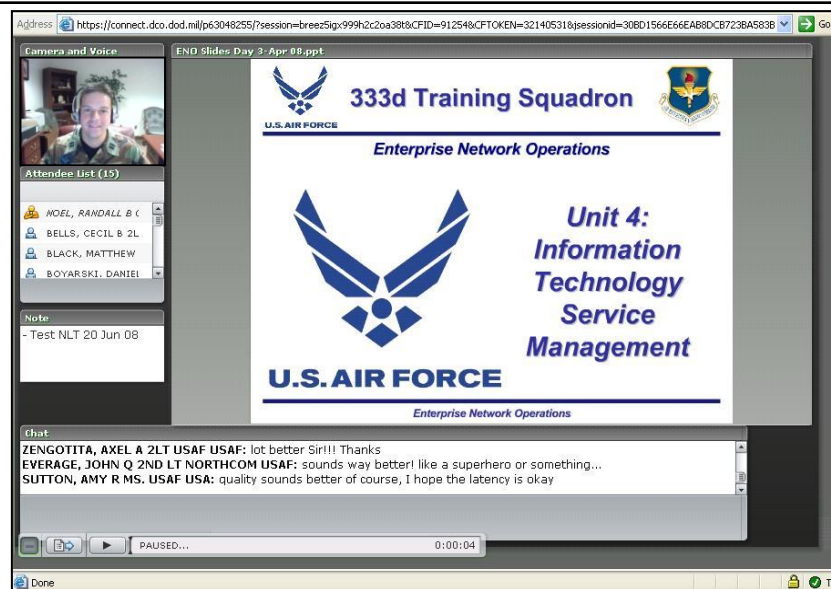Phase 3

Webcast Bookable Saving

Student Throughput

- FY10 – 421 (projected)
- FY09 – 518
- FY08 – 278
- FY07 – 258

Cost Savings

- FY10 – $570K (projected)
- FY09 – $700K
- FY08 – $380K
- FY07 – $340K

Current Courses

- Warfighting Integration
- Enterprise Network Operations
- Deployed Comm
- ~~TDC Essentials~~

FY10 Throughput Down - TDC Essentials Discontinued

MyBase Vignettes

- **Vignette 1: Public**
  - **Recruiting**
  - **Public Awareness**

- **Vignette 2: Training**
  - **Squadron Officer School**
  - **Technical Training**

- **Vignette 3: Operational**
  - **Rehearsals**
  - **Operations**